FEDERAL GRANT OPPORTUNITIES

updated 10/22/10

new opportunities or changes highlighted

Open grants & deadlines:

- **FY 2009 Global Climate Change Mitigation Incentive Fund (GCCMIF)**
- **Federal Loan Guarantees for Projects that Employ Innovative Energy Efficiency, Renewable Energy, & Advanced Transmission & Distribution Technologies** *(September 14, 2009-August 24, 2010; November 13, 2009-December 31, 2010)*
- **Fundamental Research Program for Industry/University Cooperative Research Centers (FRP)** (February 2, 2011)
- **Vocational Training and Education for Clean Energy (VOC TEC)** (October 27, 2010)
- **Proliferation Detection Research** (November 12, 2010)
- **Renewal-Supplemental Applications for the Office of Science Grants and Cooperative Agreements** (September 30, 2011)
- **The Nuclear Science and Security Consortium** (November 29, 2010)
- **8th Annual P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet** (December 22, 2010)
- **CHE-DMR-DMS Solar Energy Initiative(SOLAR)**(January 25, 2011)
- **National Geothermal Student Competition** (November 12, 2010)
- **Fuel Cell Technologies Early Market Opportunities** (December 18, 2010)
- **FY 2011 Continuation of Solicitation for the Office of Science Financial Assistance Program** (September 30, 2011)

FY 2009 Global Climate Change Mitigation Incentive Fund (GCCMIF)

- Applications due: Rolling basis
- Visit http://www.eda.gov/ for additional information and for any programming changes
- GCCMIF established to strengthen the link between economic development and environmental quality
- GCCMIF finances projects that foster economic development by advancing the green economy in distressed communities
- Applications are competitive, based on the Economic Development Association's standard eligibility and distress criteria, investment policy guidelines, and funding priority considerations
- Projects must achieve the same job and capital investment outcomes as traditional EDA investments
- Project must be one of the following:
    - Renewable energy (wind, solar, biomass, and geothermal)
    - Energy efficiency
    - Reuse/Recycling/Restoration (reuse of a given product or production of a new or innovative product for recyclable materials; also includes ecosystem restoration)
    - Green building (new construction or renovation certified by USGBC in LEED or comparable certificate program
- Must result with outputs:
    - Development and/or manufacture of green end-product that furthers or contributes to sustainability and/or environmental quality (activity, item, plan, or program)
    - Greening of an existing function or process (investments that result in green enhancements to the resource, energy, water, and/or waste efficiency of an existing function or process)
    - Creation or renovation of a green building

ARRA - Federal Loan Guarantees for Projects that Employ Innovative Energy Efficiency, Renewable Energy, & Advanced Transmission & Distribution Technologies

Funding Opportunity Announcement (FOA) # DE-FOA-0000140

- Application due dates:
    - Parts I & II submission dates depend on rounds
    - Part I: September 14, 2009 – August 24, 2010
    - Part II: November 13, 2009 – December 31, 2010
- Submission of applications for loan guarantees under Title XVII of the Energy Policy Act of 2005 in support of debt financing for projects in the U.S. that employ energy efficiency, renewable energy, and advanced transmission and distribution technologies that constitute new or significantly improved technologies that are not a commercial technology
- DOE will make up to $8.5 billion in loan guarantee authority available
- Despite the due dates, the solicitation will remain open until the aggregate $8.5 billion in loan guarantee authority is fully obligated
- Visit http://www.fedconnect.net/ to view the full FOA, and consult http://www.energy.gov/, http://www.whitehouse.gov/omb/ or http://www.recovery.gov/ for additional information

- Only 3 categories of projects that begin construction no later than 9/30/11 are eligible under Section 1705 of Title XVII and may have their credit subsidy costs covered by appropriated funds under the Recovery Act
    1. Renewable energy systems, including incremental hydropower, that generate electricity or thermal energy and facilities that manufacture related components
    2. Electric power transmission system projects, including upgrading projects
    3. Leading edge biofuel projects that will use technologies performing at the pilot or demonstration scale that the Secretary determines are likely to become commercial technologies and will produce transportation fuels that substantially reduce life-cycle greenhouse gas emissions compared to other transportation fuels
- Eligible projects in categories listed below and which fall within 1 of the 2 distinct project types described:
    1. Alternative fuel vehicles
    2. Biomass
    3. Efficient electricity transmission, distribution, and storage
    4. Energy efficient building technologies and applications
    5. Geothermal
    6. Hydrogen and fuel cell technologies
    7. Energy efficiency projects
    8. Solar
    9. Wind & hydropower

- Technology categories for 1705 eligible projects are limited to renewable energy systems projects, electric power transmission systems projects, and leading edge biofuels projects
- Per DOE, eligible projects under categories 1, 4, 6, & 7 generally do not constitute 1705 eligible projects for which the credit subsidy costs may be paid for out of funds appropriated under the Recovery Act to pay for the costs of loan guarantee issued under the Section 1705 program
- Project types: manufacturing or stand-alone; see FOA for list of primary goals and objectives for these project types

Fundamental Research Program for Industry/University Cooperative Research Centers (FRP)

Sol# 10-601

- Responses due February 2, 2011.
- For more info, contact Rathindra DasGupta at rdasgupt@nsf.gov or go to: http://www.nsf.gov/pubs/2010/nsf10601/nsf10601.htm
- Areas of interest include, but are not limited to: Energy and the Environment; and Advanced Manufacturing.
- $1.6 million expected to be available, up to 10 awards anticipated. The average award size is expected to range from $50,000 up to $200,000.
    - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
    - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)
- Eligibility is based on center performance: Fundamental research opportunities under this solicitation are available for I/UCRCs that meet the criteria as outlined in the current *Industry/University Cooperative Research Centers Program (I/UCRC)* solicitation. This opportunity requires that centers submitting fundamental research proposals meet the following conditions for eligibility:
    - Maintain sufficient industrial memberships to meet minimum program requirements,
    - Engage graduate students in center research projects,
    - Actively engage industry with a minimum of two Industry Advisory Board meetings annually, and
    - Disseminate current and accurate information to the public about their center via the NSF web site. NSF directory listings must be current and accurate by the supplement deadline date. Updates can be sent to the I/UCRC program director if needed.
- Eligibility for industry-defined fundamental research option: Centers seeking to apply for additional funding as permitted under the industry-defined fundamental research option must meet the following conditions for eligibility:
    - A letter from the Industry Advisory Board (IAB) must accompany the proposal.
    - The IAB letter must confirm that the IAB was actively engaged in defining the fundamental research project.
    - Only industry I/UCRC members may participate in an industry-defined research project.
    - Industry-participation must enable the center to extend its fundamental research project portfolio into areas that might not otherwise be researched.
- Each proposal must include a letter(s) from the participating industry partner(s) detailing measurable industry collaboration (degree and extent to which the industry will be involved with the proposed research). Proposals not meeting this requirement will be returned without review as being non-responsive.

- Description: The National Science Foundation encourages the submission of industry-defined fundamental research proposals from NSF Industry/University Cooperative Research Centers (I/UCRC). Industry-defined fundamental research broadens the scientific and engineering understanding beyond the more specific applied research interests of the industries traditionally served by the I/UCRC. Industry participation extends the scope and horizon of center research projects so as to drive innovation with industrially relevant fundamental research projects.

Vocational Training and Education for Clean Energy (VOC TEC)

Funding Opportunity Number: RFA-OAA-10-000011

- Closing Date for Applications: Oct 27, 2010
- Funding Instrument Type: Cooperative Agreement
- Expected Number of Awards: 1
- Estimated Total Program Funding:
- Award Ceiling: $10,000,000
- CFDA Number(s): 98.001 -- USAID Foreign Assistance for Programs Overseas
- Cost Sharing or Matching Requirement: Yes
- Eligible Applicants: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"
- Description: USAID intends to award a worldwide Leader with Associate (LWA) Cooperative Agreement for the VOCational Training and Education for Clean energy, or VOC TEC. The purpose of this program is to bolster the capacity of local stakeholders to sustain renewable energy investments, primarily in decentralized clean energy technologies and hybrid renewable energy-hydrocarbon systems. The focus of the program will be on distributed energy systems, specifically wind, solar PV, micro-hydro, and hybrid energy systems utilizing any of these three technologies along with fossil-fueled generators. Emphasis will be on developing local capacity to assemble, design, install, operate, and maintain facility-specific or community-level micro-grid systems. The LWA agreement may be with a single institution or with a consortium of institutions. USAID estimates that the USAID/EGAT Energy Team contribution to this agreement will total approximately $3 million dollars over a five-year period from approximately FY2010 to FY2015. USAID anticipates the total ceiling will be $10 million ($3 million to the Leader Award and $7 million towards the Associate Awards).
- For additional information go to www.grants.gov

Proliferation Detection Research

- Funding Opportunity Number: DE-FOA-0000400
- Closing Date for Applications: Nov 12, 2010
- Expected Number of Awards: 15
- Estimated Total Program Funding: $10,000,000
- Award Ceiling: $300,000
- Award Floor: $200,000
- Registration Requirements
    - Applicants must obtain a DUNS number. http://fedgov.dnb.com/webform
    - Applicants must register with the CCR. http://www.ccr.gov/
    - Applicants must register with Grants.gov. http://grants.gov/
    - Applicants must register with FedConnect. www.fedconnect.net
- The U.S. Department of Energy (DOE), National Nuclear Security Administrations (NNSA) Office of Nonproliferation and Verification Research and Development (NA-22) is soliciting applications for the research and development (R&D) needs described herein.
- The NNSA/NA-22, has the responsibility to sponsor R&D activities to improve U.S. National capabilities to detect and monitor indicators of foreign nuclear weapons programs. NA-22 sponsors research in Radiation Sensors and Advanced Materials, Nuclear Forensics, Global Safeguards, Remote Sensing, Radiological Replacement Sources, and Simulation, Modeling and Algorithms, amongst other areas.
- Eligibility for award is restricted to universities as authorized in Section 313 of the Omnibus Appropriations Act of 2009.
    - Each university selected for award will be the lead organization and will be held responsible for managing the entire scope, schedule and cost of the project, to include all reporting.
    - Another restriction imposed in accordance with 10 CFR 600.6(b) is end-users who are directly supported under the PDP11 program shall be restricted to U.S. citizens. For the purpose of this program an end-user is any individual whose services and/or position is supported by direct funding under this program.

Research is being sought in the following topic areas:

- Topic 1: Radiation Sensors and Advanced Materials Research;
- Topic 2: Nuclear Forensics;
- Topic 3: Remote Sensing;
- Topic 4: Radiological Replacement Sources;
- Topic 5: Global Safeguards; and
- Topic 6: Simulation, Algorithms and Modeling

Renewal-Supplemental Applications for the Office of Science Grants and Cooperative Agreements

- Funding Opportunity Number: DE-FOA-0000412
- For additional information go to www.grants.gov
- Closing Date for Applications: Sep 30, 2011
- Estimated Total Program Funding: $800,000,000
    - No Floor or Ceiling: The number of awards is subject to availability of FY 2011 funds.
    - Cost Sharing Not Required
- Eligible Applicants: All types of applicants are eligible to apply except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and non-profit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
- Summary: The Office of Science of the Department of Energy hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, and Workforce Development for Teachers and Scientists. On September 3, 1992, DOE published in the Federal Register the Office of Energy Research Financial Assistance Program (now called the Office of Science Financial Assistance Program), 10 CFR Part 605, Final Rule, which contained a solicitation for this program. Information about submission of applications, eligibility, limitations, evaluation and selection processes and other policies and procedures are specified in 10 CFR Part 605.
- Research opportunities exist in the following Office of Science research programs and subprograms. Additional details, websites, and technical points of contact are provided in the materials that follow.

1. Advanced Scientific Computing Research (ASCR)
    (a) Applied Mathematics
    (b) Computer Science
    (c) Computational Partnerships
    (d) Network Environment Research
2. Basic Energy Sciences (BES)
    (a) Materials Chemistry
    (b) Biomolecular Materials
    (c) Synthesis and Processing Science
    (d) Experimental Condensed Matter Physics
    (e) Theoretical Condensed Matter Physics
    (f) Physical Behavior of Materials
    (g) Mechanical Behavior and Radiation Effects
    (h) X-ray Scattering
    (i) Neutron Scattering
    (j) Electron and Scanning Probe Microscopies
    (k) Atomic, Molecular, and Optical Sciences
    (l) Gas Phase Chemical Physics
    (m) Computation and Theoretical Chemistry
    (n) Condensed Phase and Interfacial Molecular Science (CPIMS)
    (o) Catalysis Science
    (p) Separations and Analysis
    (q) Heavy Element Chemistry

(r) Geosciences Research
(s) Solar Photochemistry
(t) Photosynthetic Systems
(u) Physical Biosciences
(v) BES Accelerator and Detector Research

3. Biological and Environmental Research (BER)
    (a) Biological Systems Science
    (b) Climate and Environmental Sciences
4. Fusion Energy Sciences (FES)
    (a) FES Science and Facility Operations
    (b) FES Enabling Research and Development
5. High Energy Physics (HEP)
    (a) Experimental High Energy Physics Research
    (b) Theoretical High Energy Physics Research
    (c) HEP Advanced Technology Research and Development
6. Nuclear Physics (NP)
    (a) Medium Energy Nuclear Physics
    (b) Heavy Ion Nuclear Physics
    (c) Low Energy Nuclear Physics
    (d) Nuclear Theory (including the Nuclear Data subprogram)
    (e) Isotope Development and Production for Research and Applications
    (f) Accelerator Research and Development for Current and Future Nuclear Physics Facilities
7. Workforce Development for Teachers and Scientists (WDTS)

THE NUCLEAR SCIENCE AND SECURITY CONSORTIUM

- Funding Opportunity Number: DE-FOA-0000365
- For additional Information go to www.grants.gov
- Closing Date for Applications: Nov 29, 2010
- Estimated Total Program Funding: $25,000,000
    - Award Ceiling: $25,000,000
    - Expected Number of Awards: 1
    - Approximately a total of $5 million a year is expected to be available for one or more awards under this announcement, contingent upon the availability of appropriated funds.
    - No Cost Sharing required
- Eligible Applicants: In accordance with 10 CFR 600.6(b), eligibility for award is restricted to universities as authorized in Section 313 of the Omnibus Appropriations Act of 2009. The university selected for award will be the lead organization and will be held responsible for managing the entire scope, schedule and cost of the project, to include all reporting.
- Federally Funded Research and Development Center (FFRDC) Contractors. FFRDC contractors, such as National Laboratories, may be proposed as a team member or subcontractor on another entity's application.
- Summary: The intent of this Funding Opportunity Announcement (FOA) is to award a five year cooperative agreement to a consortium of accredited U.S. Colleges and Universities to allow them to receive and administer faculty and student research fellowship and scholarship funding awarded by the U.S. Department of Energy (DOE), National Nuclear Security Administration (NNSA), Office of Nonproliferation and Verification Research and Development (NA-22).
- NA-22 proposes to establish a program in nuclear science and engineering, including nuclear security, to provide an effective source of innovation and highly trained engineers and scientists. The program addresses the pressing shortfalls in trained professionals capable of supporting crucial nuclear nonproliferation missions such as nuclear forensics and international safeguards.
- Goals of the NSSC are to:
    - Support multiyear research projects which are of a basic or fundamental nature that do not necessarily align with programmatic missions of DOE/NNSA but are critical to maintaining the discipline of nuclear science and security.
    - Achieve the congressional goals of the IUP of supporting the continued development of the nuclear engineering and science discipline.
    - Enable collaborative research relationships between universities, the National laboratories, and other government agencies.
    - Transition technology from universities to National Laboratories.
    - Motivate talented researchers toward careers in nuclear security applications.
- The NSSC may support:
    - Multi-year research grants for research projects which are of a basic or fundamental nature that do not necessarily align directly with NNSA's programmatic missions, but which are critical to maintaining the discipline of nuclear science and engineering. Research projects are considered to be of a basic or fundamental nature if they are directed solely toward increasing knowledge or understanding in nuclear science and engineering rather than the exploitation of specific scientific discoveries or improvements in technology for the development of new materials, devices, methods, or processes;

- Graduate and post-doctoral basic research fellowships relating to nuclear science and engineering, including nonproliferation research, at National Laboratories;
- Support undergraduate basic research scholarships and internships and graduate research fellowships relating to nuclear science and engineering;
- Support undergraduate, graduate, and post-graduate students within the consortia to intern at any National Laboratory performing nonproliferation basic research and development. This can be in a collaborative environment with a National Laboratory or utilizing National Laboratory personnel in an adjunct faculty role;
- Create early-career professorial fellowships relating to nuclear science and engineering to include research support funds;
- Improving university and college infrastructures for conducting basic research and development relating to nuclear science and engineering;
- Incorporating outcomes of sponsored research into continuous nuclear science and engineering expertise development improvement.

8th Annual P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet

- EPA-G2011-P3-Q1 – Energy
- For additional information go to: http://www.epa.gov/ncer/rfa/2011/2011_p3.html
- Closing Date: December 22, 2010
- Estimated Number of Awards: Approximately 64 awards for Phase I; Approximately 15 awards for Phase II .
    - Anticipated Funding Amount: Approximately $2,310,000 total for all Phase I & II grant awards.
    - Potential Funding per Award: Up to $15,000 per Phase I grant including direct and indirect costs.
    - Any proposals requesting an award of more than $15,000 will not be considered. Proposals for
    - Phase I grants must be for only one year. Upon the successful completion of Phase I, grant recipients will have the opportunity to apply for a P3 Phase II grant of up to $90,000 total for two years including direct and indirect costs (see Background section for more information).
    - Proposals for Phase II grants requesting an award of more than $90,000 will not be considered. Cost-sharing is not required for either Phase I or Phase II grants.
- Eligibility Information: Public nonprofit institutions/organizations (limited to degree-granting public institutions of higher education) and private nonprofit institutions/organizations (limited to degree-granting private institutions of higher education) located in the U.S. are eligible to apply. See full announcement for more details.
- Application Materials: To apply under this solicitation, use the application package available at Grants.gov (for further submission information see Section IV.E. "Submission Instructions for Phase I Applications and Other Submission Requirements "). The necessary forms for submitting a P3 application will be found on the National Center for Environmental Research (NCER) web site, http://www.epa.gov/ncer/rfa/forms/. If your organization is not currently registered with Grants.gov, you need to allow approximately one week to complete the registration process. This registration, and electronic submission of your application, must be performed by an authorized representative of your organization.
- Synopsis of Program: The U.S. Environmental Protection Agency (EPA), as part of the P3 Award Program, is seeking applications proposing to research, develop, and design solutions to real world challenges involving the overall sustainability of human society. The P3 competition highlights the use of scientific principles in creating innovative projects focused on sustainability. The P3 Awards program was developed to foster progress toward sustainability by achieving the mutual goals of economic prosperity, protection of the planet, and improved quality of life for its people-- people, prosperity, and the planet – the three pillars of sustainability. The EPA offers the P3 competition in order to respond to the technical needs of the world while moving towards the goal of sustainability. Please see the P3 website (http://www.epa.gov/P3) for more details about this program.
- Research Areas: Applicants should address one or more of the research areas listed below in their Phase I proposals. (Proposals can include, but are not limited to, technical challenges within the examples following each research area below.) All proposals should clearly articulate how the proposed project/design will result in pollution prevention and/or control. The link to pollution prevention can be a direct link such as reduction in air emissions from a more efficient

engine design, or an indirect link such as water conservation approaches that reduce the energy needed to supply clean drinking water and thereby result in reduced air emissions.

- Energy (e.g., reduction in air and water emissions through innovative strategies for energy production and energy distribution; energy conservation; inherently benign energy through green chemistry, green engineering, development of alternative energy sources)
  (Funding Opportunity Number: EPA-G2011-P3-Q1 – Energy)
- Built Environment (e.g., green building designs, transportation and mobility strategies, or smart growth approaches that result in environmental benefits such as air emission reductions or water quality improvements)
  (Funding Opportunity Number: EPA-G2011-P3-Q2 – Built Environment)
- Materials and Chemicals (e.g., materials conservation; renewable feedstocks; materials and chemicals that are inherently benign and energy-, water- and material efficient through their full life-cycles; recovery and reuse of materials through product, process, or system design; biomimicry that contributes to pollution prevention)
  (Funding Opportunity Number: EPA-G2011-P3-Q3 – Materials and Chemicals)
- Water (e.g., research relating to causes, effects, extent, prevention, reduction and elimination of water pollution; research on the structure and function of freshwater ecosystems for the maintenance of the chemical, physical and biological integrity of the systems; or research to ensure provision of a dependable safe supply of drinking water, including methods to treat raw water for drinking, improvements in water purification and distribution, and protection of underground water sources of public water systems)
  (Funding Opportunity Number: EPA-G2011-P3-Q4 – Water)
- Agriculture (e.g., reduction or elimination of pesticides, minimizing fertilizer and nutrient runoff, productive use of agricultural wastes. Projects focused solely on food supply are not allowable.)
  (Funding Opportunity Number: EPA-G2011-P3-Q5 – Agriculture)

CHE-DMR-DMS Solar Energy Initiative (SOLAR)

NSF 10-613

- Full Proposal Deadline(s): January 25, 2011
- For additional information go to: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf10613
- Estimated Number of Awards: 5 to 10
    - Under this solicitation proposals may be submitted for funding durations up to three years. The budget must be commensurate with the project and thoroughly justified in the proposal. The NSF expects to fund 5 to 10 awards in fiscal year 2011 depending on the quality of submissions and the availability of funds. The anticipated start date of awards is September 2011.
- Anticipated Funding Amount: $12,000,000
    - Typical award size is expected to be approximately $500,000 per year and may vary depending on the scope of the proposal.
- Eligible Applicants: Proposals may only be submitted by the following: Universities and Colleges - Universities and four-year colleges accredited in and having a campus located in the US, acting on behalf of their faculty members
- Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
- Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)
- Synopsis of Program: The purpose of the CHE-DMR-DMS Solar Energy Initiative is to support interdisciplinary efforts by groups of researchers to address the scientific challenges of highly efficient harvesting, conversion, and storage of solar energy. Groups must include three or more co-Principal Investigators, of whom one must be a researcher in chemistry, a second in materials, and a third in mathematical sciences, in areas supported by the Divisions of Chemistry, Materials Research, and Mathematical Sciences, respectively. The intent is to encourage new collaborations in which the mathematical sciences are linked in a synergistic way with the chemical and materials sciences to develop novel, potentially transformative approaches in an area of much activity but largely incremental advances. Successful proposals will offer potentially transformative projects, new concepts, and interdisciplinary education through research involvement based on the integrated expertise and synergy from the three disciplinary communities.

National Geothermal Student Competition

- For more information go to: http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=421
- $100,000 up to as many as 10 collegiate teams
- Proposals are due November 12, 2010

The U.S. Department of Energy (DOE) on October 18, 2010 announced the launch of its inaugural National Geothermal Student Competition. DOE, through its Geothermal Technologies Program (GTP), will provide up to $100,000 to fund as many as 10 collegiate teams that will participate in this competition. In this intercollegiate competition—the first ever to address geothermal education—student teams will be challenged to advance their understanding of geothermal energy's potential as a significant contributor to our nation's energy portfolio. Geothermal technology allows for consistently produced energy by tapping into the heat of the earth and emits minimal greenhouse gases. Expanding the use of geothermal resources as a domestic energy source will play an important role in increasing America's energy independence.

The National Geothermal Student Competition will require student teams to conduct extensive research on the geothermal energy potential of the Rio Grande Rift geologic province located in southeastern Colorado and northeastern New Mexico. Each team will produce sets of data that assess a suite of geologic, engineering, environmental, land use, policy and cultural issues that are crucial to future geothermal development in the United States. The Rio Grande Rift is a high potential, but relatively undeveloped, geothermal region that is representative of the geothermal potential in other areas in the United States.

The National Geothermal Student Competition is open to all colleges, universities and other post-secondary institutions in the United States. To participate in the competition, teams should submit proposals through DOE's National Renewable Energy Laboratory Request for Proposals link on its Business Opportunities Web page. Up to 10 teams will be selected to participate based on a competitive review of the proposals. Proposals are due November 12, 2010.

GTP works to establish geothermal energy as a significant contributor to America's future electricity generation by partnering with industry, academia and national laboratories to discover new geothermal resources, develop innovative methods for tapping geothermal resources, and demonstrate high-impact technologies. A key element of GTP's mission is to develop and support a national effort encouraging collegiate level students to specialize in those disciplines and fields vital to the growth and development of the geothermal industry. This competition will provide students with opportunities to gain important industry knowledge, skills and experience, and prepare them to play a significant role in the future of geothermal energy.

Fuel Cell Technologies Early Market Opportunities

DE-FOA-0000429

- Subject: Request for Information (RFI) for the potential for the deployment of Hydrogen and Fuel Cell Technologies in three distinct strategic early market areas.
- Comments must be received no later than 11:59 PM EDT on 12/18/2010
- Description: The Department of Energy (DOE) is seeking feedback from relevant industry stakeholders to assist in the deployment of hydrogen and fuel cell technologies in three distinct topic areas including Turnkey Project Management for Distributed Generation (DG) Fuel Cells in Federal Facilities, Turnkey Project Management for Hydrogen Energy Storage to Support Renewable Power Generation, and the feasibility of near commercial deployment of fuel cell powered Ground Support Equipment (GSE) for commercial and government operated airports.
- Purpose: The purpose of this RFI is to support the FCT program in obtaining information relevant to the core requirements and relevant costs for each of the areas of interest. This will include information pertaining to capabilities in project management and readiness level of applicable hydrogen and fuel cell technologies as identified in the areas of interest outlined in this RFI.
- Areas of Interest: Responses to these areas of interest are limited to one page in length per area of interest. When more than one area of interest is addressed, submit separate one-page submissions to the e-mail address above.
    - Area of Interest 1: Turnkey Project Management for Distributed Generation (DG) Fuel Cells in Federal Facilities: The FCT Program seeks responses from firms with experience in planning and managing Prime Power DG systems projects. The FCT Program is in the process of promoting the deployment of Prime Power DG systems into National Laboratory facilities and other Federal agencies. The FCT Program is presently assessing feasibility study projects at several potential site locations, and the Prime Power DG system capacity ratings range from 300 kW to 2.8 MW for the projects under review. These projects would involve the installation of Prime Power DG systems at several Federal facilities on facility grounds interconnected into the facility's electrical distribution system in a grid parallel configuration. The energy generated by the Prime Power DG systems would be used on-site to offset grid-supplied electrical energy.
    - As part of a response to this RFI, the FCT Program is interested in comments and insight on:
        - Forming Prime Power DG system scope of work, including design, pre-construction environmental resource impact surveys, permitting, start-up and commissioning times, post-construction environmental resource impact surveys, and a typical timeline schedule.
        - Descriptions of how project developers obtain private investment capital financing for comprehensive procurement of Prime Power DG systems and the deployment of these systems at the host sites, including an assessment of savings and/or benefits resulting from the aggregation of the host site projects into a "bundled" procurement of Prime Power DG systems.
        - Description of typical operation and maintenance plans.
    - Area of Interest 2: Turnkey Project Management for Hydrogen Energy Storage to Support Renewable Power Generation : The FCT Program seeks responses from firms with experience in hydrogen generation from renewable feedstock sources. The FCT Program is reviewing the capability of hydrogen generation to improve the capacity utilization of intermittent renewable energy sources, such as photovoltaic arrays and wind turbines, by providing a means for grid energy storage (> 1MW). In particular,

grid-connected wind turbines have been incurring frequent instances of stoppage due solely to the absence of grid demand for electricity. This curtailment downtime contributes to reduced utilization of wind energy assets, reducing efficiency and increasing the cost of electricity. The FCT Program is exploring the potential for hydrogen generation to avoid curtailment downtime, increasing efficiency, and lowering the cost of energy production. The FCT Program is also exploring the potential for hydrogen generation to provide a power producer with revenue flexibility (including new product opportunities for revenue that are independent of the regulated grid market) as well as new opportunities for products and services considered strategically important by the ISO grid market. This flexibility should ultimately benefit the customers of all markets and promote the growth of renewable energy assets.

- Area of Interest 3: Ground Support Equipment (GSE) for Commercial or Government-Owned Airports: This area of interest is focused on airport GSE as applicable to the needs of commercial or government-owned airport facilities. The Battelle Memorial Institute study, "Identification and Characterization of Near-term Direct Hydrogen Proton Exchange Membrane Fuel Cell Markets" indicates that the airport GSE has the potential to provide significant lifecycle cost savings over lead- acid battery and combustion engine systems under certain types of operation.
- Responses should describe at a minimum –
    - A complete fuel cell power system designed for powering airport GSE;
    - GSE equipment retrofit specifications (as applicable);
    - Technical requirements for fuel cell stacks, balance of plant, thermal management, and power electronics;
    - The fuel storage and dispensing system including installation, commissioning, maintenance, and decommissioning capable of supporting the GSE fill requirements for the specified operations (system shall be capable of safely dispensing fuel into the proposed GSE);
    - Weather shelter for dispensing operations; and
    - A plan for obtaining all necessary government approvals and permits for all aspects of the dispensing system

FY 2011 Continuation of Solicitation for the Office of Science Financial Assistance Program

Funding Opportunity Number: DE-FOA-0000411

- This FOA, DE-FOA-0000411, is for new applications; a companion FOA, DE-FOA-0000412, exists for renewal and supplemental applications.
- Where to Submit: Applications must be submitted through Grants.gov to be considered for award. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately. Remember you have to update your CCR registration annually.
- Registration Requirements: There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov).
- For additional information go to www.grants.gov
- Closing Date for Applications: Sep 30, 2011
- Estimated Total Program Funding: $800,000,000
    - No Floor or Ceiling: The number of awards is subject to availability of FY 2011 funds.
    - Cost Sharing Not Required
- Eligible Applicants: All types of applicants are eligible to apply except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and non-profit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
- Summary: The Office of Science of the Department of Energy hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, and Workforce Development for Teachers and Scientists. On September 3, 1992, DOE published in the Federal Register the Office of Energy Research Financial Assistance Program (now called the Office of Science Financial Assistance Program), 10 CFR Part 605, Final Rule, which contained a solicitation for this program. Information about submission of applications, eligibility, limitations, evaluation and selection processes and other policies and procedures are specified in 10 CFR Part 605.
- Research opportunities exist in the following Office of Science research programs and subprograms. Additional details, websites, and technical points of contact are provided in the materials that follow.

    1. Advanced Scientific Computing Research (ASCR)
        (a) Applied Mathematics
        (b) Computer Science
        (c) Computational Partnerships
        (d) Network Environment Research
    2. Basic Energy Sciences (BES)
        (a) Materials Chemistry
        (b) Biomolecular Materials
        (c) Synthesis and Processing Science
        (d) Experimental Condensed Matter Physics
        (e) Theoretical Condensed Matter Physics

(f) Physical Behavior of Materials
(g) Mechanical Behavior and Radiation Effects
(h) X-ray Scattering
(i) Neutron Scattering
(j) Electron and Scanning Probe Microscopies
(k) Atomic, Molecular, and Optical Sciences
(l) Gas Phase Chemical Physics
(m) Computation and Theoretical Chemistry
(n) Condensed Phase and Interfacial Molecular Science (CPIMS)
(o) Catalysis Science
(p) Separations and Analysis
(q) Heavy Element Chemistry
(r) Geosciences Research
(s) Solar Photochemistry
(t) Photosynthetic Systems
(u) Physical Biosciences
(v) BES Accelerator and Detector Research

3. Biological and Environmental Research (BER)
    (a) Biological Systems Science
    (b) Climate and Environmental Sciences
4. Fusion Energy Sciences (FES)
    (a) FES Science and Facility Operations
    (b) FES Enabling Research and Development
5. High Energy Physics (HEP)
    (a) Experimental High Energy Physics Research
    (b) Theoretical High Energy Physics Research
    (c) HEP Advanced Technology Research and Development
6. Nuclear Physics (NP)
    (a) Medium Energy Nuclear Physics
    (b) Heavy Ion Nuclear Physics
    (c) Low Energy Nuclear Physics
    (d) Nuclear Theory (including the Nuclear Data subprogram)
    (e) Isotope Development and Production for Research and Applications
    (f) Accelerator Research and Development for Current and Future Nuclear Physics Facilities
7. Workforce Development for Teachers and Scientists (WDTS)